## ABSTRACT OF THE DISCLOSURE

The inventive method for assaying DNA fragments in mixture comprises

step 1 of ligating different oligomers hybridizable to primers of the same melting temperature and the same length to individual groups of DNA fragments in a set of DNA fragments;

step 2 of mixing together the groups of DNA fragments ligated with the oligomers;

step 3 of simultaneous PCR of the groups of DNA fragments ligated with the oligomers in one receptacle by using the primers being complementary to the oligomers and corresponding to the individual groups; and step 4 of detecting PCR amplified DNA fragments; characterized in that the method enables the comparison of plural samples under no influence of PCR reproducibility.